

Bay Area Air Quality Management District

939 Ellis Street
San Francisco, CA 94109
(415) 771-6000

MAJOR FACILITY REVIEW PERMIT

Issued To:
Union Sanitary District
Site #A1209

Site Address:
5072 Benson Road
Union City, CA 94587

Mailing Address:
5072 Benson Road
Union City, CA 94587
(510) 790-0100

Responsible Official - Stephen T. Hayashi
Facility Contact - James Chen

Type of Facility:	Municipal Wastewater Treatment Plant (Publicly Owned Treatment Works)
Primary SIC:	4952
Product:	Treated Municipal Wastewater

ISSUED BY THE BAY AREA AIR QUALITY MANAGEMENT DISTRICT

Ellen J. Garvey, Air Pollution Control Officer

Date

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I. STANDARD CONDITIONS

Administrative Requirements

The permit holder shall comply with all applicable requirements in BAAQMD Regulation 1 - General Provisions and Definitions (11/3/93); SIP Regulation 1 - General Provisions and Definitions (3/17/82); BAAQMD Regulation 2, Rule 1 - Permits, General Requirements (6/7/95); SIP Regulation 2, Rule 1 - Permits, General Requirements (2/1/95); BAAQMD Regulation 2, Rule 2 - Permits, New Source Review (6/7/95); SIP Regulation 2, Rule 2 - Permits, New Source Review and Prevention of Significant Deterioration (12/1/82); and BAAQMD Regulation 2, Rule 4 - Permits, Emissions Banking (6/15/94).

Conditions to Implement Regulation 2, Rule 6, Major Facility Review

This Major Facility Review Permit expires on ***[ENTER DATE 5 YEARS AFTER ISSUANCE]***. The permit holder shall submit a complete application for renewal of this Major Facility Review Permit no later than ***[6 MONTHS PRIOR TO EXPIRATION]*** and no earlier than ***[ONE YEAR PRIOR TO EXPIRATION]***. **If a complete application for renewal has not been submitted in accordance with these deadlines, the facility may not operate after *[DAY PRIOR TO EXPIRATION]*.** (Regulation 2-6-307, 404.2, & 409.6; MOP Volume II, Part 3, §4.2)

The permit holder shall comply with all conditions of this permit. Any non-compliance with the terms and conditions of this permit will constitute a violation of the law and will be grounds for enforcement action; permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)

In the event any enforcement action is brought as a result of a violation of any term or condition of this permit, the fact that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with such term or condition shall not be a defense to such enforcement action. (MOP Volume II, Part 3, §4.11)

This permit may be modified, revoked, reopened and reissued, or terminated for cause. (Regulation 2-6-307, 409.8, 415; MOP Volume II, Part 3, §4.11)

The filing of a request by the facility for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated non-compliance does not stay the applicability of any permit condition. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)

This permit does not convey any property rights of any sort, nor any exclusive privilege. (Regulation 2-6-409.7; MOP Volume II, Part 3, §4.11)

The permit holder shall supply any information that the District requests in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit within 30 days. (Regulation 1-441, Regulation 2-6-409.4 & 501; MOP Volume II, Part 3, §4.11)

Any records required to be maintained pursuant to this permit which the permittee considers to contain proprietary or trade secret information shall be prominently designated as such. Copies of any such proprietary or trade secret information which are provided to the District shall be maintained by the District in a locked confidential file, provided, however, that requests from

I. Standard Conditions (continued)

the public for the review of any such information shall be handled in accordance with the District's procedures set forth in Section 11 of the District Administrative Code. (Regulation 2-6-419; MOP Volume II, Part 3, §4.11)

The emissions inventory submitted with the application for this Major Facility Review Permit is an estimate of actual emissions for the time period stated and is included only as one means of determining applicable requirements for emission sources. It does not establish, or constitute a basis for establishing, any new emission limitations. (MOP Volume II, Part 3, §4.11)

Minor Permit Modification Procedures

Notwithstanding the provisions set forth in Regulation 2, Rule 6, Major Facility Review, Section 411, Reports to EPA and Public Petitions for Major Facility Review Permits; Section 412, Public Participation, Major Facility Review Permit Issuance; and Section 414, Minor Permit Modification Procedures:

1. Advance public notice and EPA review shall not be required for any proposed minor permit modification. Once per calendar quarter, the District shall publish a list that includes any minor permit modification issued during the previous quarter.
2. For any minor permit modification involving an emission increase from any source or group of sources equal to or greater than: 5 tons per year of a regulated air pollutant; 2 tons per year of any single hazardous air pollutant; and 5 tons per year of any combination of hazardous air pollutants, the District shall provide to EPA a copy of each relevant application or a summary of the application, and a copy of each final permit revision.
3. For any minor permit modification involving an emission increase from any source or group of sources of less than: 5 tons per year of a regulated air pollutant, 2 tons per year of any single hazardous air pollutant; and 5 tons per year of any combination of hazardous air pollutants, the District shall not submit a copy of the relevant application, a summary of the application, or final permit revision to EPA. EPA shall not object to any permit modification involving an emission increase below the levels described herein. Such permit modifications shall be incorporated as attachments to this permit during the remaining term of the permit, and incorporated into the body of the permit as part of the five-year permit renewal.

Requirement to Pay Fees

The permit holder shall pay annual fees in accordance with District Regulation 3, including Schedule P. (Regulation 2-6-402 & 409.13, Regulation 3; MOP Volume II, Part 3, §4.12)

Inspection and Entry

Access to Facility: The permit holder shall provide reasonable access to the facility and equipment which is subject to this permit to the APCO and/or to his or her designee. (Regulation 1-440, Regulation 2-6-409.3; MOP Volume II, Part 3, §4.14)

Records

Notwithstanding the specific wording in any requirement, all records for federally enforceable requirements shall be maintained for at least five years from the date of entry. (Regulation 2-6-501, Regulation 3; MOP Volume II, Part 3, §4.7)

I. Standard Conditions (continued)

Monitoring Reports

All required monitoring reports must be submitted to the District at least once every six months. All instances of non-compliance shall be clearly identified in these reports. The reports shall be certified by the responsible official as true, accurate, and complete. (Regulation 2-6-502, Regulation 3; MOP Volume II, Part 3, §4.7)

Compliance Certification

Compliance certifications shall be submitted annually by the responsible official of this facility to the Bay Area Air Quality Management District and to the Environmental Protection Agency. (Regulation 2-6-409.9; MOP Volume II, Part 3, §4.15)

Emergency Provisions

The permit holder may seek relief from enforcement action in the event of a breakdown, as defined by Regulation 1-208 of the District's Rules and Regulations, by following the procedures contained in Regulations 1-431 and 1-432. The District will thereafter determine whether breakdown relief will be granted in accordance with Regulation 1-433. (MOP Volume II, Part 3, §4.8)

The permit holder may seek relief from enforcement action for a violation of any of the terms and conditions of this permit caused by conditions beyond the permit holder's reasonable control by applying to the District's Hearing Board for a variance pursuant to Health and Safety Code Section 42350. The Hearing Board will determine after notice and hearing whether variance relief should be granted in accordance with the procedures and standards set forth in Health and Safety Code Section 42350 et seq. Any variance granted by the Hearing Board from any term or condition of this permit which lasts longer than 90 days will be subject to EPA approval. (MOP Volume II, Part 3, §4.8)

Notwithstanding the foregoing, the granting by the District of breakdown relief or the issuance by the Hearing Board of a variance will not provide relief from federal enforcement unless the Major Facility Review Permit has been modified pursuant to Regulation 2, Rule 6. (MOP Volume II, Part 3, §4.8)

Severability

In the event that any provision of this permit is invalidated by a court or tribunal of competent jurisdiction, or by the Administrator of the EPA, all remaining portions of the permit shall remain in full force and effect. (Regulation 2-6-409.5; MOP Volume II, Part 3, §4.10)

II. EQUIPMENT LIST

A. Permitted Source List

Each of the following sources has been issued a permit to operate pursuant to the requirements of BAAQMD Regulation 2-1-302.

Table II-A

S-#	Description	Make or Type	Model	Capacity
S-4	Reciprocating Engine, Rich burn	Waukesha IC Engine; Digester Gas Fueled	L5108G4	402 HP (Electrical Output = 300 KW)
S-14	Waste Gas Burner (Industrial Flare); Digester Gas Fired	Varec Digester Gas Burner	Varec	28 MM Btu/hr
S-15	Reciprocating Engine - Electrical Generator, Rich burn	Waukesha IC Engine; Digester Gas Fueled	9300	1005 HP (Electrical Output = 750 KW)
S-40	Hot Water Sludge Heating Boiler #4	Weil McLain Steam Boiler; Digester Gas Fired, Front Firing, Forced Draft	R8-SG07GP10 1LH301R1	1.4 MM Btu/hr max
S-41	Hot Water Sludge Heating Boiler #5	Weil McLain Steam Boiler; Digester Gas Fired, Front Firing, Forced Draft	R8-SG07GP10 1LH301R1	1.4 MM Btu/hr max
S-42	Waste Gas Burner #3 (Industrial Flare)	Varco; Digester Gas Fired	5,170,000 Btu/hr	25 MM Btu/hr
S-43	Hot Water Boiler,	Cleaver-Brooks	700-200-125/FGR	8370K Btu/hr max
S-100	Wastewater Treatment Plant	Custom	N/A	43.2 MM gal/day capacity
S-101	Gasoline Dispensing Island	Emco Wheaton	A3003/A3005	1,000 gal
S-102	Diesel Storage Tank	Custom	N/A	10,000 gallon capacity, 7.11 ft diameter
S-110	Preliminary Treatment	Custom	N/A	43.2 MM gal/day capacity
S-111	Preliminary Treatment, 3 Barscreens	Custom	N/A	43.2 MM gal/day capacity

(continued)

II. Equipment List (continued)

A. Permitted Source List (continued)

Table II-A (continued)

S-#	Description	Make or Type	Model	Capacity
S-120	Primary Treatment	Custom	N/A	43.2 MM gal/day capacity
S-130	Secondary Treatment	Custom	N/A	43.2 MM gal/day capacity
S-131	Secondary Treatment	Custom	N/A	43.2 MM gal/day capacity
S-135	Secondary Treatment, INKA Process	Custom	N/A	876K gal/day capacity
S-140	Secondary Treatment; Clarifiers	Custom	N/A	43.2 MM gal/day capacity
S-145	Secondary Treatment, INKA Clarifiers	Custom	N/A	3.36 MM gal/day capacity
S-150	Disinfection	Custom	N/A	43.2 MM gal/day capacity
S-160	Sludge Handling Processes	Custom	N/A	3.36 MM gal/day capacity
S-161	Sludge Handling - Gravity Thickeners	Custom	N/A	3.36 MM gal/day capacity
S-162	Sludge Handling - Solids Handling Building	Custom	N/A	3.36 MM gal/day capacity
S-163	Sludge Handling - Pumping Station	Custom	N/A	43.2 MM gal/day capacity
S-164	Sludge Handling - Gravity Belt Thickeners	Custom	N/A	3.36 MM gal/day capacity
S-165	Water Reclamation	Custom	N/A	250,000 gal/day capacity
S-170	Anaerobic Digester	Custom	N/A	unknown

II. Equipment List (continued)

B. Abatement Device List

Table II-B

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Required Efficiency
A-1	Permanganate Air Scrubber	S-110	BAAQMD Reg. 1-301	none listed	N/A
A-2	Permanganate Air Scrubber	S-110	BAAQMD Reg. 1-301	none listed	N/A
A-3	Permanganate Air Scrubber	S-160	BAAQMD Reg. 1-301	none listed	N/A
A-4	Permanganate Air Scrubber	S-160	BAAQMD Reg. 1-301	none listed	N/A
A-5	Turbulator	S-15		none listed	N/A
A-20	Atomizer Scrubber	S-110	BAAQMD Reg. 1-301	none listed	N/A
A-21	Atomizer Scrubber	S-120	BAAQMD Reg. 1-301	none listed	N/A
A-22	Atomizer Scrubber	S-130	BAAQMD Reg. 1-301	none listed	N/A
A-23	Atomizer Scrubber	S-120	BAAQMD Reg. 1-301	none listed	N/A
A-24	Atomized Mist Scrubber	S-110, S-111	BAAQMD Reg. 1-301	none listed	N/A
A-25	Atomized Mist Scrubber	S-110, S-111	BAAQMD Reg. 1-301	none listed	N/A
A-26	Atomized Mist Scrubber	S-160, S-164	BAAQMD Reg. 1-301	none listed	N/A
A-27	Atomized Mist Scrubber	S-160, S-164	BAAQMD Reg. 1-301	none listed	N/A
A-28	Atomized Mist Scrubber	S-130	BAAQMD Reg. 1-301	none listed	N/A
A-29	Atomized Mist Scrubber	S-130, S-131	BAAQMD Reg. 1-301	none listed	N/A
A-30	Atomizer Scrubber	S-130, S-131	BAAQMD Reg. 1-301	none listed	N/A

(continued)

II. Equipment List (continued)

B. Abatement Device List (continued)

Table II-B (continued)

A-#	Description	Source(s) Controlled	Applicable Requirement	Operating Parameters	Required Efficiency
A-31	Atomized Mist Scrubber	S-135	BAAQMD Reg. 1-301	No detection of odorous breakthrough	N/A
A-32	Atomizer Scrubber	S-130	BAAQMD Reg. 1-301	none listed	N/A
A-33	Atomizer Scrubber	S-160, S-161, S-163	BAAQMD Reg. 1-301	none listed	N/A
A-34	Atomizer Scrubber	S-160, S-162	BAAQMD Reg. 1-301	none listed	N/A
A-35	Atomizer Scrubber	S-160, S-162	BAAQMD Reg. 1-301	none listed	N/A
A-36	Atomizer Scrubber	S-160	BAAQMD Reg. 1-301	none listed	N/A
A-37	Soil Odor Scrubber	S-135	BAAQMD Reg. 1-301	No detection of odorous breakthrough	N/A

III. GENERALLY APPLICABLE EMISSION REQUIREMENTS

The permit holder shall comply with the applicable requirements specified in the BAAQMD and SIP Rules and Regulations cited below. The District has determined that these requirements would not be violated under normal, routine operations, and that no additional periodic monitoring or reporting to demonstrate compliance is warranted. In cases where a requirement, in addition to being generally applicable, is also specifically applicable to one or more sources, the requirement and the source are also included in Part IV, Applicable Requirements, of this permit. The dates in parenthesis in the Title column are the dates of adoption or most recent amendment or for SIP requirements, the most recent date of EPA approval.

Table III

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Sources/Operations Covered
BAAQMD Regulation 1	General Provisions and Definitions (11/3/93)	Y ¹	all
BAAQMD Regulation 4	Air Pollution Episode Plan (3/20/91)	Y	facility
BAAQMD Regulation 5	Open Burning (11/2/94)	Y ¹	facility
BAAQMD Regulation 6	Particulate Matter and Visible Emissions (12/19/90)		
6-301	Ringelmann Number 1 Limitation	Y ¹	all, except temporary sandblasting, open fires, and operations subject to BAAQMD §6-303, 304, or 306
6-303	Ringelmann Number 2 Limitation	Y	sources listed in subsections
6-305	Visible Particles	Y	all, except temporary sandblasting and open fires

(continued)

III. Generally Applicable Emission Requirements (continued)

Table III (continued)

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Sources/Operations Covered
6-310	Particulate Weight Limitation	Y	all, except temporary sandblasting and open fires
6-401	Appearance of Emissions	Y	all
BAAQMD Regulation 7	Odorous Substances (3/17/82)	N	all
BAAQMD Regulation 8, Rule 1	Organic Compounds - General Provisions (6/15/94)	Y	solvent cleaning operations, except operations subject to Reg. 8-2 or 8-4 which meet minimum abatement requirements
Regulation 8 Rule 2	Organic Compounds - Miscellaneous Operations	Y	
BAAQMD 8-2-301	Miscellaneous Operations Standards	Y	
BAAQMD 8-2-601	Determination of Compliance	Y	
BAAQMD Regulation 8, Rule 3	Organic Compounds - Architectural Coatings (12/20/95)	Y ¹	application of architectural coating
BAAQMD Regulation 8, Rule 49	Organic Compounds - Aerosol Paint Products (12/20/95)	Y ¹	application of or specifications for aerosol products
BAAQMD Regulation 8, Rule 51	Organic Compounds - Adhesive and Sealant Products (12/20/95)	N	application or specification of adhesive or sealant products

(continued)

III. Generally Applicable Emission Requirements (continued)

Table III (continued)

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Sources/Operations Covered
BAAQMD Regulation 9, Rule 1	Inorganic Gaseous Pollutants - Sulfur Dioxide (3/15/95)		
9-1-110	Conditional Exemption, Area Monitoring	Y ¹	operations complying with all area monitoring reqmts in Reg. 1 since prior to 1/1/80 and complying with BAAQMD §9-1-301
9-1-301	Limitations on Ground Level Concentrations	Y ¹	all, except ships
9-1-302	General Emission Limitation	Y	all, except those exempt under 9-1-110 or subject to any of 9-1-304 through 9-1-312
9-1-304	Fuel Burning (Liquid and Solid Fuels)	Y	all combustion operations, except as specified in §9-1-304.1, 304.2, or 304.3
9-1-501	Area Monitoring Requirements	Y ¹	operations subject to area monitoring
9-1-502	Emission Monitoring Requirements	Y ¹	operations subject to BAAQMD §9-1-304, 307, 309, or 310
BAAQMD Regulation 9, Rule 2	Inorganic Gaseous Pollutants - Hydrogen Sulfide (3/17/82)		
9-2-301	Limitations on Hydrogen Sulfide	N	all
9-2-501	Area Monitoring Requirements	N	operations emitting hydrogen sulfide
BAAQMD Regulation 11, Rule 1	Hazardous Pollutants - Lead (3/17/82)		

(continued)

III. Generally Applicable Emission Requirements (continued)

Table III (continued)

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Sources/Operations Covered
11-1-301	Daily Limitation	Y	all
11-1-302	Ground Level Concentration Limit Without Background	Y	all
11-1-303	Ground Level Concentration with Background	Y	as elected in written notification to APCO
11-1-501	Monitoring	Y	operations subject to §11-1-303
11-1-602	Determination of Background Concentrations)	Y ¹	operations subject to §11-1-303
11-1-603	Atmospheric Sampling	Y ¹	operations subject to §11-1-303
BAAQMD Regulation 11, Rule 2	Hazardous Pollutants - Asbestos Demolition, Renovation and Manufacturing (12/4/91)	Y	asbestos surfacing/coating, installation, demolition, disposal
BAAQMD Regulation 12, Rule 4	Miscellaneous Standards of Performance - Sandblasting (7/11/90)	Y ¹	non-permanent abrasive blasting operations

¹ There are differences between the current BAAQMD rule and the version of the rule in the SIP. For specific information, contact the District's Rule Development Section of the Enforcement Division. All sources must comply with both versions of the rule until US EPA has reviewed and approved (or disapproved) the District's revision of the regulation.

IV. APPLICABLE REQUIREMENTS

The permit holder shall operate in compliance with all requirements specified in the sections of the applicable rules and regulations and permit conditions cited below. The text of all permit conditions cited is included in Part V, Permit Conditions, of this permit. All other text may be found in the regulations themselves. The dates in parenthesis in the Regulation Title column are the dates of adoption or most recent amendment or for SIP requirements, the most recent date of EPA approval.

Table IV-A

S-4, Reciprocating Engine, Digester Gas Fired

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Regulation 9, Rule 8	Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (1/20/93)		
9-8-302	Emission Limits - Waste Derived Fuel Gas	N	1-1-97
9-8-302.2	NOx Limits for Rich Burn Engines	N	1-1-97
9-8-302.3	CO Limits	N	1-1-97
9-8-401	Compliance Schedule	N	1-1-97
9-8-501	Initial Demonstration of Compliance	N	1-1-97
9-8-502	Recordkeeping	N	1-1-97
9-8-601	Determination of Nitrogen Oxides	N	1-1-97
9-8-602	Determination of Carbon Monoxide and Stack Gas Oxygen	N	1-1-97

IV. Applicable Requirements (continued)

Table IV-B

S-15, Reciprocating Engine, Digester Gas Fired

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Regulation 9, Rule 8	Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Stationary Internal Combustion Engines (1/20/93)		
9-8-302	Emission Limits - Waste Derived Fuel Gas	N	1-1-97
9-8-302.2	NOx Limits for Rich Burn Engines	N	1-1-97
9-8-302.3	CO Limits	N	1-1-97
9-8-401	Compliance Schedule	N	1-1-97
9-8-501	Initial Demonstration of Compliance	N	1-1-97
9-8-502	Recordkeeping	N	1-1-97
9-8-601	Determination of Nitrogen Oxides	N	1-1-97
9-8-602	Determination of Carbon Monoxide and Stack Gas Oxygen	N	1-1-97
BAAQMD Cond. 457			
part 1	NOx Emission Rate (Cumulative Increase)	Y	
part 2	CO Emission Limit (Cumulative Increase)	Y	
part 3	Engine Control & Operation (Cumulative Increase)	Y	

IV. Applicable Requirements (continued)

Table IV-C

S-40 Hot Water Sludge Heating Boiler, Stand-by Service
S-41 Hot Water Sludge Heating Boiler, Stand-by Service

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Regulation 9, Rule 7	Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (9/15/93)		
9-7-111	Limited Exemption, Low Fuel Usage	N	
9-7-304	Low Fuel Usage Requirement	N	
BAAQMD Cond. 389			
part 1	Fuel Throughput exemption (Reg. 9-7-111)	N	
part 2	Stack gas O2 (Reg. 9-7-304)	N	
part 3	Recordkeeping to monitor compliance (Reg. 9-7-111)	N	
part 4	Determination of digester gas heating value (Reg. 9-7-605)	N	

IV. Applicable Requirements (continued)

Table IV-D

S-43, Hot Water Boiler, Digester or Natural Gas Fired

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Regulation 9, Rule 7	Inorganic Gaseous Pollutants - Nitrogen Oxides and Carbon Monoxide from Industrial, Institutional, and Commercial Boilers, Steam Generators, and Process Heaters (9/15/93)		
9-7-301.1	Emission Limits-Gaseous Fuel-NOx	N	
9-7-301.2	Emission Limits-Gaseous Fuels-CO	N	
9-7-403	Initial Demonstration of Compliance	N	
9-7-503	Records	N	
BAAQMD Cond 9238			
part 1	Fuel throughput (Cumulative Increase)	Y	
part 2	NOx Limit (BACT)	Y	
part 3	H2S Limit from Scrubbers (BACT)	Y	
part 4	Protocol for source testing (BACT)	Y	
part 5	Records (BACT)	Y	

IV. Applicable Requirements (continued)

Table IV-E

S-100, Municipal Wastewater Treatment Plant

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Cond 9236			
part 1	Consequences of odor complaints (Reg. 1-301; Public Nuisance)	N	

Table IV-F

S-135 Secondary Treatment (INKA)

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Cond 9236			
part 1	Atomized Scrubber Abatement (Reg. 1-301; Public Nuisance)	N	
part 2	Consequences of detection of odors (Reg. 1-301; Public Nuisance)	N	

Table IV-G

S-165 Water Reclamation (0.25 MGD)

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Cond 11145			
part 1	Water throughput (Cumulative Increase)	Y	
part 2	Records (Cumulative Increase)	Y	
part 3	Prohibition of odors (Reg. 1-301; Public Nuisance)	N	
part 4	Consequences of public nuisance odors (Reg. 1-301; Public Nuisance)	N	

IV. Applicable Requirements (continued)

Table IV-H

S-101, Gasoline Dispensing Island

Applicable Requirement	Regulation Title or Description of Requirement	SIP-approved/ FE (Y/N)	Future Effective Date
BAAQMD Regulation 8, Rule 7	Organic Compounds - Gasoline Dispensing Facilities (6/1/94)		
8-7-301	Phase I Requirements	Y	
8-7-301.1	Requirement for CARB Phase I System	Y	
8-7-301.2	Installation of Phase I Equipment per CARB Requirements	Y	
8-7-301.3	Submerged Fill Pipes	Y	
8-7-301.4	P-V Valves on All Open Vent Pipes	Y	
8-7-301.5	Maintenance of Phase I Equipment per Manufacturers Guidelines	Y	
8-7-301.6	Leak-Free, Vapor-Tight	Y	
8-7-301.7	Poppetted Drybreaks	Y	
8-7-302	Phase II Requirements	Y	
8-7-302.1	Requirement for CARB Certified Phase II System	Y	
8-7-302.2	Maintenance of Phase II System per CARB Requirements	Y	
8-7-302.3	Maintenance of All Equipment as Specified by Manufacturer	Y	
8-7-302.4	Repair of Defective Parts Within 7 Days	Y	
8-7-302.5	Leak-Free, Vapor-Tight	Y	
8-7-303	Topping Off	Y	
8-7-304	Certification Requirements	Y	
8-7-306	Prohibition of Use	Y	
8-7-307	Posting of Operating Instructions	Y	
8-7-308	Operating Practices	Y	
8-7-309	Contingent Vapor Recovery Requirements	Y	
8-7-312	Removal of Gasoline	Y	
8-7-404	Certification of New Installations	Y	
8-7-501	Burden of Proof	Y	
8-7-502	Right of Access	Y	

V. PERMIT CONDITIONS

Any condition that is preceded by an asterisk is not federally enforceable.

A. Source Specific Permit Conditions

Condition # 457

For S-15 Waste Gas Burner

1. The NO_x (Calculated as NO₂) emission rate from this engine shall not exceed 2 gram/hp-hr. (Basis: Cumulative Increase)
2. The CO Emission shall not exceed 550 pounds per day. (Basis: Cumulative Increase)
3. Union Sanitary shall maintain the following elements in its engine system and shall not operate this engine without them unless the District gives prior approval: (Basis: Cumulative Increase)
 - 3.1 Automatic Air-to-fuel control system
 - 3.2 Addition of ferrous chloride to the digester.
 - 3.3 Sulfide gas scrubbers (iron sponge) following the digester.
 - 3.4 Chemical element gas filter (Nelson Winslow).
 - 3.5 Non-metallic gasketed joints in the engine exhaust system.
 - 3.6 Lubricating oil which is relatively phosphorus and heavy metal free.
 - 3.7 A turbulator thermal reactor with a centrifugal air blower to supply oxygen for combustion to reduce emissions as an exhaust emissions abatement measure.

V. Permit Conditions (continued)

A. Source Specific Permit Conditions (continued)

Condition # 389

For S-40 & S-41 (Hot Water Sludge Heating Boilers # 4 & #5 respectively)

- *1. S-40 and S-41 boilers (1.4 MM Btu/hr input rating) heat input shall not exceed 90,000 therms each during any consecutive 12 month period, as determined from the higher heating value and cumulative 12 month usage of fuel (Basis: BAAQMD Regulation 9-7-111)
- *2. S-40 and S-41 shall meet one of the following: a) Operate in a manner that maintain stack-gas oxygen concentrations at less than or equal to 3 percent by volume on a dry basis; or b) Tune at a frequency of at least once every twelve months by a technician as directed by the BAAQMD Manual of Procedures, Volume I, Chapter 5 (Basis: BAAQMD Regulation 9-7-304)
- *3. To determine compliance with the above conditions, the Permit Holder shall maintain the following records and provide all of the data necessary to evaluate compliance with the above conditions, including the following information: (Basis: BAAQMD Regulation 9-7-111)
 - a. Monthly records of hours of boiler operation and digester gas consumption (therms) as well as running 12 month digester gas consumption (therms) records.. All records shall be retained on-site for two years, from the date of entry, and made available for inspection by District staff upon request. These recordkeeping requirements shall not replace the recordkeeping requirements contained in any applicable District Regulations (Basis: BAAQMD Regulation 9-7-503).
- *4. The higher heating value of digester gas shall be determined by ASTM D1826-88 or ASTM D1945-81 in conjunction with ASTM D3588-89 (Basis: BAAQMD Regulation 9-7-605).

V. Permit Conditions (continued)

A. Source Specific Permit Conditions (continued)

Condition # 9238

For S-43 Hot Water Boiler 200 HP

1. Throughput

Digester gas usage at S-43 boiler shall not exceed 52.8 E3 MM Btu/yr (gross basis). (Basis: Cumulative Increase)

2. Flue Gas NO_x, CO Concentrations

The maximum S-43 flue gas NO_x concentration shall not exceed 40 ppmv (@3% oxygen). The maximum S-43 flue gas CO concentrations shall not exceed 100 ppmv (@3% oxygen). (Basis: BACT)

3. Digester Gas H₂S Content

Union Sanitary District shall operate the ferric oxide scrubbers A-171 to maintain the concentration of hydrogen sulfide in the digester gas being fired in S-43 at a level not to exceed 100 ppmv hydrogen sulfide. (Basis: BACT)

4. Source Testing

To demonstrate compliance with permit condition 2, above, Union Sanitary District shall within 60 days of startup of this source, conduct a District approved source test pursuant to the following protocols. Source test results shall be submitted to the District within 60 days of completion of the source test. (Basis: BACT)

Protocol-NO_x Determination: The methods by which sample of exhaust gases are collected and analyzed to determine concentrations of nitrogen oxides are set forth in the District's Manual of Procedures, Volume IV, ST-13A.

Protocol-CO, O₂ Determination: The methods by which samples of exhaust gases are collected and analyzed to determine concentrations of carbon monoxide and stack gas oxygen are set forth in the District's Manual of Procedures, Volume IV, ST-6 (carbon monoxide) and ST-14 (oxygen).

V. Permit Conditions (continued)

A. Source Specific Permit Conditions (continued)

Condition # 9238 (continued)

For S-43 Hot Water Boiler 200 HP

5. Recordkeeping

To demonstrate compliance with permit conditions 1 and 3 above, USD shall keep monthly records (on site) of S-43 operation. Such records shall include hours of operation, quantities of fuel being fired, and average H₂S concentration of the digester gas. Such records shall be maintained on site for a period of at least one year. The log shall be kept on site and made available to the District staff upon request. (Basis: Cumulative Increase, BACT)

Condition #9236

For S-100 Municipal Wastewater Treatment Plant

***1. Nuisance**

In the event that a public nuisance odor source is identified at this facility, Union Sanitary District shall employ all measures, practices, or modifications necessary to abate the nuisance. (Basis: BAAQMD Regulation 1-301)

Condition #9728

For S-135 Secondary Treatment (INKA)

***1. Abatement**

S-135 Secondary Treatment Compressed Air Basins shall not be operated unless the basins are covered and vented to abatement device A-31 Atomized Mist Scrubber or A-37 Soil Odor Scrubber. (Basis: BAAQMD Regulation 1-301)

***2. Odor Detection**

Upon detection of odorous breakthrough, Union Sanitary District shall follow established operating procedures to abate the odors. (Basis: BAAQMD Regulation 1-301)

V. Permit Conditions (continued)

Condition #11145

For S-165 Water Reclamation, 0.25 MGD with 2 FLOC basins, 20' diam Clarifier, 2 granular media filters and 21 Mgal chlorine tank

1. The total throughput of wastewater treated at S-165 shall not exceed 0.25 Million Gallons in any single day. (Basis: Cumulative Increase)
2. The Daily throughput of wastewater to S-165 shall be recorded in a district approved log. This log shall be kept on site for at least one year and made available to District staff on request. (Basis: Cumulative Increase)
- *3. S-165 shall not operate in such a manner so as to cause an odor public nuisance per Regulations 1-301 and 7-302. (Basis: BAAQMD Regulation 1-301)
- *4. If three or more BAAQMD Notices of Violation are received by the owner/operator of S-165 within a 40 day period, the owner/operator shall submit to the BAAQMD an application for an Authority to Construct additional odor abatement equipment as deemed necessary by the BAAQMD within 60 days of reviewing the third notice. (Basis: BAAQMD Regulation 1-301)

B. Facility-wide Permit Conditions

None

VI. APPLICABLE EMISSION LIMITS & COMPLIANCE MONITORING REQUIREMENTS

The following tables indicate the type of compliance monitoring required for each applicable emission limit. The monitoring frequency indicates whether periodic (P) or continuous (C) monitoring is required. No monitoring (N) has been required if the current applicable rule or regulation does not require monitoring and the operation is unlikely to deviate from the applicable emission limit based upon the nature of the operation.

Table VI-A

S-15, Reciprocating Engine, Digester Gas Fired

Pollutant	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	9-8-302.2	N	1/1/97	210 ppmv @ 15% O ₂ , dry		N	
CO	9-8-302.3	N	1/1/97	2000 ppmv @ 15% O ₂ , dry		N	
NOx	Cond 457, Part 1	Y		2 g/hp-hr		N	N/A
CO	Cond 457, Part 2	Y		550 lb/day		N	N/A

VI. Applicable Emission Limits & Compliance Monitoring Requirements (continued)

Table VI-B

S-43, Hot Water Boiler, Digester Gas or Natural Gas Fired

Pollutant	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
NOx	9-7-301.1	N		30 ppmv @ 3% O ₂ , dry		N	
CO	9-7-301.2	N		400 ppmv @ 3% O ₂ , dry		N	
NOx	Cond 9238, Part 2	Y		40 ppmv @ 3% O ₂		N	
CO	Cond 9238, Part 2	Y		100 ppmv @ 15% O ₂ ,		N	
H ₂ S	Cond 9238, Part 3	N		100 ppmv	Cond 9238, Part 5	P	records

Table VI-C

S-165, Water Reclamation - 0.25 MGD

Pollutant	Emission Limit Citation	FE Y/N	Future Effective Date	Emission Limit	Monitoring Requirement Citation	Monitoring Frequency (P/C/N)	Monitoring Type
Waste-water		N		0.25 MGD	BAAQMD Cond 11145	P	daily records

VII. TEST METHODS

The test methods associated with the emission limit of a District regulation are generally found in Section 600 of the regulation. The following table indicates only the test methods associated with the emission limits referenced in Section VI - Applicable Emission Limits & Compliance Monitoring Requirements.

Table VII

Applicable Requirement	Description of Requirement	Acceptable Test Methods	SIP-Approved
BAAQMD Cond # 9238	Flue Gas NO _x Concentrations	Manual of Procedures, Volume IV, ST-13 A	N
BAAQMD Cond # 9238	Flue Gas CO Concentrations	Manual of Procedures, Volume IV, ST-6 & ST-14	N
BAAQMD Cond #389	Digester Gas Higher Heat Input	ASTM D1826-88 or ASTM D1945-81 with ASTM D3588-89	N
BAAQMD 9-7-301.1	Performance Standard, NO _x , Gaseous Fuel	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling	N N
BAAQMD 9-7-301.2	Performance Standard, CO, Gaseous Fuel	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling	N N
BAAQMD 9-8-302.2	Waste Derived Fuel Gas, NO _x Limits for Lean Burn Engines	Manual of Procedures, Volume IV, ST-13A, Oxides of Nitrogen, Continuous Sampling and ST-14, Oxygen, Continuous Sampling	N N
BAAQMD 9-8-302.3	Waste Derived Fuel Gas, CO Limits	Manual of Procedures, Volume IV, ST-6, Carbon Monoxide, Continuous Sampling and ST-14, Oxygen, Continuous Sampling	N N

VIII. GLOSSARY

BAAQMD

Bay Area Air Quality Management District

BACT

Best Available Control Technology

CAA

The federal Clean Air Act

CAAQS

California Ambient Air Quality Standards

CEQA

California Environmental Quality Act

CFR

The Code of Federal Regulations. 40 CFR contains the implementing regulations for federal environmental statutes such as the Clean Air Act. Parts 50-99 of 40 CFR contain the requirements for air pollution programs.

CO

Carbon Monoxide

Cumulative Increase

The sum of permitted emissions from each new or modified source since a specified date. Used to determine whether threshold-based requirements are triggered.

District

The Bay Area Air Quality Management District

EPA

The federal Environmental Protection Agency.

Excluded

Not subject to any District Regulations.

Federally Enforceable, FE

All limitations and conditions which are enforceable by the Administrator of the EPA including those requirements developed pursuant to 40 CFR Part 51, subpart I (NSR), Part 52.21 (PSD), Part 60, (NSPS), Part 61, (NESHAPs), Part 63 (HAP), and Part 72 (Permits Regulation, Acid Rain), and also including limitations and conditions contained in operating permits issued under an EPA-approved program that has been incorporated into the SIP.

VIII. Glossary (continued)

HAP

Hazardous Air Pollutant. Any pollutant listed pursuant to Section 112(b) of the Act. Also refers to the program mandated by Title I, Section 112, of the Act and implemented by both 40 CFR Part 63, and District Regulation 2, Rule 5.

Major Facility

A facility with potential emissions of regulated air pollutants greater than or equal to 100 tons per year, greater than or equal to 10 tons per year of any single hazardous air pollutant, and/or greater than or equal to 25 tons per year of any combination of hazardous air pollutants, or such lesser quantity as determined by the EPA administrator.

MFR

Major Facility Review. The District's term for the federal operating permit program mandated by Title V of the Act and implemented by District Regulation 2, Rule 6.

MOP

The District's Manual of Procedures.

NAAQS

National Ambient Air Quality Standards

NESHAPS

National Emission Standards for Hazardous Air Pollutants. Contained in 40 CFR Part 61.

NMHC

Non-methane Hydrocarbons

NO_x

Oxides of nitrogen.

NSPS

Standards of Performance for New Stationary Sources. Federal standards for emissions from new stationary sources. Mandated by Title I, Section 111 of the Act, and implemented by both 40 CFR Part 60 and District Regulation 10.

NSR

New Source Review. A federal program for preconstruction review and permitting of new and modified sources of air pollutants for which the District is classified "non-attainment". Mandated by Title I of the Clean Air Act and implemented by 40 CFR Parts 51 and 52 as well as District Regulation 2, Rule 2. (Note: There are additional NSR requirements mandated by the California Clean Air Act.)

VIII. Glossary (continued)

Offset Requirement

A New Source Review requirement to provide federally enforceable emission offsets at a specified ratio for the emissions from a new or modified source and any pre-existing cumulative increase minus any on site contemporaneous emission reduction credits. Applies to emissions of POC, NO_x, PM₁₀, and SO₂.

Phase II Acid Rain Facility

A facility that generates electricity for sale through fossil-fuel combustion and by virtue of certain other characteristics (defined in Regulation 2, Rule 6) is subject to Titles IV and V of the Clean Air Act.

POC

Precursor Organic Compounds

PM

Total Particulate Matter

PM₁₀

Particulate matter with aerodynamic equivalent diameter of less than or equal to 10 microns

PSD

Prevention of Significant Deterioration. A federal program for permitting new and modified sources of air pollutants for which the District is classified "attainment" of the National Air Ambient Quality Standards. Mandated by Title I of the Act and implemented by both 40 CFR Part 52 and District Regulation 2, Rule 2.

SIP

State Implementation Plan. State and District programs and regulations approved by EPA and developed in order to attain the National Ambient Air Quality Standards. Mandated by Title I of the Act.

SO₂

Sulfur dioxide

Title V

Title V of the federal Clean Air Act. Requires a federally enforceable operating permit program for major and certain other facilities.

VOC

Volatile Organic Compounds

VIII. Glossary (continued)

Units of Measure:

bhp	=	brake-horsepower
Btu	=	British Thermal Unit
g	=	grams
gal	=	gallon
hp	=	horsepower
hr	=	hour
lb	=	pound
in	=	inches
max	=	maximum
m ²	=	square meter
MGD	=	million gallon per day
min	=	minute
MM	=	million
ppmv	=	parts per million, by volume
ppmw	=	parts per million, by weight
psia	=	pounds per square inch, absolute
psig	=	pounds per square inch, gauge
scfm	=	standard cubic feet per minute
yr	=	year